P/N: 800-11984V1-A 10/2012

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Performance Series

WEATHERPROOF IR CAMERA

HB75(X)

Operation Manual

READ AND KEEP THIS OPERATION MANUAL

800-11984V1 - A - 10/2012

Warnings and Cautions

Installation and servicing should be performed only by qualified and experienced personnel to conform to all local codes and to maintain your warranty.

WARNING **This device is configured for 12 V DC operation only; do NOT connect to higher voltage. Use only with NRTL approved 12 V DC power supplies. To prevent potential ground loop issues, a separate PSU should be used for each camera. A multiple output PSU may be used if the multiple output PSU has isolated and protected (2A MAX) outputs.**

Caution **The light emitted from the near-infrared light emitting diodes (LEDs) provides illumination over a wide area. This light is not considered a risk to the unshielded human eye. However, as with any light source, it is recommended that normal precautions be taken to avoid unnecessary exposure. For example, avoid staring into the beam or viewing directly with optical instruments at close range.**

NOTE IR LEDs could be warm after prolonged use.

FCC Compliance Statement

Information to the User: This equipment has been tested and found to comply with the limits for a Class A digital device. Pursuant to Part 15 of the FCC Rules, these limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Caution Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This Class A digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la Classe A est conforme à la norme NMB-003 du Canada.

Manufacturer's Declaration of Conformance

The manufacturer declares that the equipment supplied with this guide is compliant with the essential requirements of the EMC Directive 2004/108/EC and the General Product Safety Directive (GPSD) 2001/95/EC, confirming to the requirements of standards EN 55022 for emissions, EN 50130-4 for immunity, and EN 60065 for Electrical Equipment safety.

3. FEATURES

Adaptive IR Technology
"Adaptive IR" technology dramatically eliminates the white out effect and saturation on close objects, producing a clear and recognizable image regardless of viewing condition or location of objects.

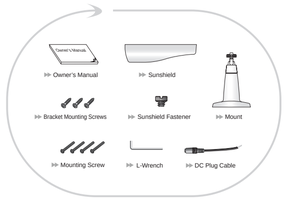
1/3" High Sensitivity CCD

Min Illumination (F1.4, 50 IRE, AGC Max)
- 0.3 LUX (COLOR)
- 0 LUX (IR LED ON)

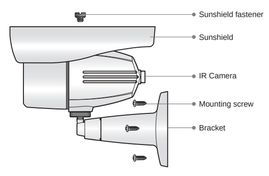
User-friendly menus
- High Resolution (600 TVL)
- SBLC (Super Back Light Compensation)
- DNR (Digital Noise Reduction)
- Privacy zone selectable
- Mirror (Horizontal)
- Flickerless On/Off

Breather vent

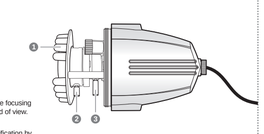
4. SUPPLIED ACCESSORIES



5. INSTALLATION



6. NAME AND FUNCTIONS



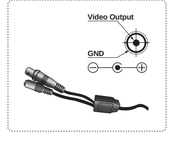
1. **IR LED**
   850nm / 30°(18EA)
2. **Focus Handle**
   Used to provide for accurate focusing of object within the lens field of view.
3. **Zoom Handle**
   Used to adjust zoom magnification by turning.

7. CONNECTIONS

Connecting to Monitor and Power

- **For 12 V DC Power Type**
  - Connect the video-out jack to the video-in jack of monitor.
  - Connect the power adapter to the power input connector.
  - Use 12 V DC power source.
  - Use the power rated at least 400 mA (12 V DC).

NO	Function	Terminal Color	Remark
#1	Video Output	Yellow	1.0 Vp-p
#2	Power Input	Red	12 V DC(±10%), Max 4.8 W / 400 mA



8. OPERATING CAMERA

LENS	ESC	BRIGHTNESS	0~5
	DC	DC LEVEL	0~5
		SHUTTER	1/60(1/50), 1/120(1/100), 1/250, 1/500, 1/700, 1/1K, 1/1600, 1/2500, 1/5K, 1/7K, 1/10K, 1/30K, 1/60K, 1/120K IR MODE 1/60 (1/50)
WHITE BAL	ATW		
	MANUAL	RED	0~160
		BLUE	0~160
	PUSH		
AGC	ON	LEVEL	0~20 (IR MODE FIXED)
	OFF		
DAY / NIGHT	IRED	MODE	WIDE, SMART
		CHANGE LEVEL	LOW, MIDDLE, HIGH
	COLOR		
	B/W	BURST	ON/OFF
IMAGE ADJ	SBLC		OFF, LOW, MIDDLE, HIGH
	DNR		OFF, LOW, MIDDLE, HIGH
	SHARPNESS	LEVEL	0~20
	MIRROR		OFF, ON
	MOTION	AREA	1~4
		DISPLAY	OFF, ON
		SENSITIVITY	1~24
		TOP	8~126 / 10~146
		BOTTOM	8~126 / 11~149
		LEFT	4~191/ 8~191
		RIGHT	4~191 / 9~192
		INITIAL	OFF↵, ON
		RETURN	↵

9. SPECIFICATION

MODEL	High resolution
Signal System	NTSC/PAL
Image Sensor	1/3" high sensitivity CCD
Effective Pixels (H × V)	768 × 494 (NTSC) / 752 × 582 (PAL)
Video Output	Composite : 1.0 Vp-p, 75 ohms
Sync. System	Internal sync
S/N Ratio	50db or more (sharpness, AGC off)
Horizontal Resolution	600 TV lines
Min Illumination	0.3 lux (color) / 0 lux (IR LED on)
ESC	1/60 – 1/120,000 (NTSC) / 1/50–1/120,000 (PAL)
Manual Shutter	1/ 60 (1/50), 1/120 (1/100), 1/ 250, 1/ 500, 1/ 700, 1/ 1K, 1/ 1.6K, 1/ 2.5K, 1/ 5K, 1/ 7K, 1/ 10K, 1/ 30K, 1/ 60K, 1/ 120K
DNR	Off, Low, Middle, High
White Balance	ATW, Manual, Push
SBLC	Off, Low, Middle, High
AGC	On, Off
Day/Night	Ired, Color, BW
Burst	On, Off
Motion Detection	On, Off (4 programmable zones)
Privacy	On, Off (4 programmable zones)
Mirror	On (horizontal), Off
Sharpness	1 ~ 20
OSD Language	English
Applicable Lens	DC iris lens
Supply Voltage	12 V DC (±10%)
Power Consumption	400 mA / 4.8 W (max)
Operating Temperature	14°F to 122°F (–10°C to 50°C)
Storage Temperature / Humidity	–4°F to 140°F (–20°C to 60°C) / 20% to 90% RH

10. TROUBLESHOOTING

If you have trouble operating your camera, refer to the following guidelines. If the guidelines do not help you to solve the problem, contact an authorized technician.

Nothing appears on the screen
- ✓ Check that the power cord and the video cable between the camera and monitor are properly connected.
- ✓ Check that you have properly connected the VIDEO cable to the camera VIDEO output jack.

The image on the screen is dim
- ✓ If the lens is obstructed (for example, with dirt), clean the lens with a soft, clean cloth.
- ✓ Set the monitor to proper condition.
- ✓ If the camera is exposed to too strong light, change the camera position.
- ✓ Adjust the lens' focus properly.

The image on the screen is dark
- ✓ Adjust the contrast feature of the monitor.
- ✓ If you loop through an intermediate device, set the termination (75 Ohms / Hi-Z) properly.

MEMO

MEMO

MEMO

● Design and specifications are subject to change without notice.

USER INFORMATION

CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION ! TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of un-insulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating instructions in the literature accompanying the appliance.

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CONTENTS

Thank you for purchasing this COLOR VIDEO CAMERA.
Before using this camera, please read this operation manual carefully to obtain the best result and keep this manual for future reference.

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1. SAFETY INSTRUCTIONS

Read Instructions
Read all of the safety and operating instructions before using the product.

Retain Instructions
Save these instructions for later use.

Cleaning
Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

Power source
This product should be operated only from a 12 V DC power source as indicated on the marking label.

2. PRECAUTIONS

- **Do not install the camera in extreme temperature conditions.**
  Operate the camera under conditions where temperatures are within +14°F to +122°F (-10°C to +50°C). Ensure there is enough ventilation in high temperature environments.
- **Do not disassemble the camera.**
  There are no user repairable parts inside.
- **Do not drop the camera or subject them to physical shocks.**
  It can cause malfunctions to occur.
- **Never keep the camera face to strong light directly.**
  It can damage CCD.
- **Do not touch the camera lens, dome or bezel (front glass plate).**
  It can cause smudging and obstructions in video images.

NOTE **When this camera is installed near wireless communication devices that emit strong electromagnetic field, irregularity such as noise on the monitor may appear.**

3. FEATURES

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	DC	DC LEVEL	0~5
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WHITE BAL	ATW		
	MANUAL	RED	0~160
		BLUE	0~160
	PUSH		
AGC	ON	LEVEL	0~20 (IR MODE FIXED)
	OFF		
DAY / NIGHT	IRED	MODE	WIDE, SMART
		CHANGE LEVEL	LOW, MIDDLE, HIGH
	COLOR		
	B/W	BURST	ON/OFF
IMAGE ADJ	SBLC		OFF, LOW, MIDDLE, HIGH
	DNR		OFF, LOW, MIDDLE, HIGH
	SHARPNESS	LEVEL	0~20
	MIRROR		OFF, ON
	MOTION	AREA	1~4
		DISPLAY	OFF, ON
		SENSITIVITY	1~24
		TOP	8~126 / 10~146
		BOTTOM	8~126 / 11~149
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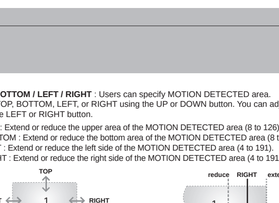
		RIGHT	4~191 / 9~192
		INITIAL	OFF↵, ON
		RETURN	↵

5. INSTALLATION



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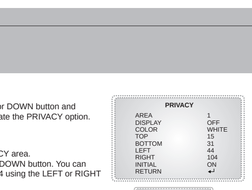

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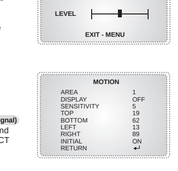

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WHITE BAL	ATW		
	MANUAL	RED	0~160
		BLUE	0~160
	PUSH		
AGC	ON	LEVEL	0~20 (IR MODE FIXED)
	OFF		
DAY / NIGHT	IRED	MODE	WIDE, SMART
		CHANGE LEVEL	LOW, MIDDLE, HIGH
	COLOR		
	B/W	BURST	ON/OFF
IMAGE ADJ	SBLC		OFF, LOW, MIDDLE, HIGH
	DNR		OFF, LOW, MIDDLE, HIGH
	SHARPNESS	LEVEL	0~20
	MIRROR		OFF, ON
	MOTION	AREA	1~4
		DISPLAY	OFF, ON
		SENSITIVITY	1~24
		TOP	8~126 / 10~146
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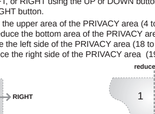
		LEFT	4~191/ 8~191
		RIGHT	4~191 / 9~192
		INITIAL	OFF↵, ON
		RETURN	↵

LENS

Press the MENU button to access the SETUP menu.



LENS DC

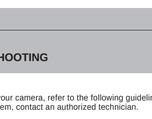
Select DC and press the MENU button to have LENS DC activated.

1. **DC LEVEL (Adjusts brightness of the image.)** :
   - Select DC LEVEL using the UP or DOWN button. You can adjust between 0 to 20 level using the LEFT or RIGHT button.
2. **FLK (FLICKERLESS)** :
   - Select FLK using the UP or DOWN button. You can select between ON / OFF using the LEFT or RIGHT button.
   - > OFF : You will be allowed to adjust the shutter speed.
3. **SHUTTER (Adjusts the shutter speed of the lens.)** :
   - IR LED Mode : 1/60 (1/50)
   - COLOR, B/W Mode :
     Select SHUTTER using the UP or DOWN button. You can adjust from 1/60 (1/50), 1/120 (1/100), 1/250,1/500, 1/700, 1/1K, 1/1600, 1/2500, 1/5K, 1/7K, 1/10K, 1/30K, 1/60K, 1/120K(sec) level using the LEFT or RIGHT button.

WHITE BAL (White Balance)

Select WHITE BAL using the UP or DOWN button. You can select from ATW, MANUAL, and PUSH using the LEFT or RIGHT button.

1. **ATW** : Color temperature is automatically adjusted for light sources in the 2,000ºK to 10,000ºK range.
2. **MANUAL** : To adjust the white balance manually.
   - Select MANUAL using the UP or DOWN button and press the MENU button to activate WB MANUAL option.



1. RED : To adjust density of RED (0~160)
2. BLUE : To adjust density of BLUE (0~160)

3. **PUSH** : Push Lock mode fixes the white balance based on current lighting. For best results, place a white surface (such as a piece of paper) in front of the camera during adjustment.

AGC (Automatic Gain Control)

Select AGC using the UP or DOWN button. You can select between OFF, and ON using the LEFT or RIGHT button.
AGC is fixed at a certain level in IR LED mode.
AGC level is selectable in COLOR, or B/W mode.

1. **ON** : Select ON using the LEFT or RIGHT button and press the MENU button to activate the AGC option.

1. LEVEL : You can adjust between 0 to 20 using the LEFT or RIGHT button.

2. **OFF** : Disable the AGC.

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